

What is claimed is:

1. A test strip for chemical analysis of a sample, adapted for use in combination with a measuring device having a test port and capable of performing a multiplicity of testing functionalities, said test strip comprising:

- 5
- (a) a support capable of releasably engaging said test port;
- (b) at least one reaction area on said support for receiving said sample; and
- (c) an indicator capable of interacting with said test port to select at least one of said multiplicity of testing functionalities of said measuring device.

10

2. The test strip of claim 1, wherein said indicator comprises one or more electrically conductive indicator contacts capable of engaging at least two electrically conductive pins within said test port, thereby selecting at least one of said multiplicity of testing functionalities of said measuring device.

15

3. The test strip of claim 1, wherein said indicator comprises one or more electrically conductive indicator contacts capable of engaging at least two electrically conductive pins within said test port, thereby closing a circuit between said at least two electrically conductive pins, thereby selecting at least one of said multiplicity of testing functionalities of said measuring device.

20

4. The test strip of claim 1, wherein said indicator comprises one or more projections on said support capable of mechanically engaging one or more pins within said test port, thereby selecting at least one of said multiplicity of testing functionalities of said measuring device.

5. The test strip of claim 4, wherein said projections displace one or more of said pins.

6. The test strip of claim 1, wherein said indicator comprises one or more depressions on said support capable of mechanically engaging one or more pins within said test port, thereby selecting at least one of said multiplicity of testing functionalities of said measuring device.

5 7. The test strip of claim 6, wherein one or more of said pins may be displaced into said depressions.

8. The test strip of claim 6, wherein said depressions define one or more holes.

9. The test strip of claim 1, wherein said indicator comprises an optically detectable pattern capable of signaling or being detected by an optical detector in said test port, thereby selecting at least one of said multiplicity of testing functionalities of said measuring device.

10. The test strip of claim 2, wherein said indicator contacts comprise a material selected from the group consisting of carbon, gold, silver, platinum,
15 nickel, palladium, titanium, copper, and lead.

11. The test strip of claim 10, wherein said material is a printable ink.

12. The test strip of claim 1, wherein said sample is a bodily fluid.

13. The test strip of claim 1, wherein said chemical analysis comprises measuring in said sample the concentration of a compound selected from the
20 group consisting of L-amino acids, alcohols, aldehydes, ketones, urea, creatinine, xanthines, sarcosine, glucolate, pyruvate, lactate, fructosamine, methylamine, carbon monoxide, cholesterol, hemoglobin, glycated hemoglobin, microalbumin, high density lipoproteins, and low density lipoproteins.

14. The test strip of claim 1, wherein said compound is glucose.

15. The test strip of claim 1, wherein said reaction area comprises one or more reagents adsorbed to said support, said reagent capable of reacting with a compound in said sample.

16. The test strip of claim 15, wherein said reagent is selected from the group consisting of glucose oxidase, lactate dehydrogenase, peroxidase, and galactose oxidase.

17. The test strip of claim 1, further comprising a multiplicity of electrically conductive testing contacts capable of transferring current between said reaction area and said measuring device.

18. The test strip of claim 17, wherein said testing contacts comprise a material selected from the group consisting of carbon, gold, silver, platinum, nickel, palladium, titanium, copper and lead.

19. The test strip of claim 18, wherein said material is a printable ink.

20. The test strip of claim 17, wherein said testing contacts are located on a first major surface of said test strip and said indicator contacts are located on a second major surface of said test strip.

21. The test strip of claim 17, wherein said testing contacts and said indicator contacts are located on the same surface of said test strip.

22. A test port for use in a measuring device capable of performing a multiplicity of testing functionalities and adapted for use in combination with a multiplicity of different types of test strips, each of said types of test strips

corresponding to at least one of said testing functionalities, and at least some of said types of test strips having indicators of said testing functionality thereon, said port comprising a sensor capable of specifically interacting with said indicators on said test strips, thereby selecting at least one of said multiplicity of testing functionalities corresponding to a test strip.

23. The test port of claim 22, wherein said indicators are electrically conductive and said sensor comprises a multiplicity of electrically conductive pins.

24. The test port of claim 23, wherein at least two of said electrically conductive pins may be bridged by said indicators, thereby closing an electrical circuit.

25. The test port of claim 22, wherein said indicators comprise projections or depressions on said test strips and said sensor is a mechanical sensor.

26. The test port of claim 25, wherein at least a portion of said mechanical sensor may be physically displaced by said indicators, thereby either closing an electrical circuit or opening an electrical circuit.

27. The test port of claim 22, wherein said indicators are optically detectable and said sensor is an optical sensor.

28. A measuring device having a multiplicity of testing functionalities for chemical analysis, adapted for use in combination with a multiplicity of different types of test strips, each of said types of test strips corresponding to at least one of said testing functionalities, and at least some of said types of test strips having indicators of said testing functionality thereon, said device comprising:

add
on

(a) a test port comprising a sensor capable of interacting with said indicators on said test strips to select at least one of said multiplicity of testing functionalities; and

(b) a multiplicity of test circuitries for specifically measuring reactions
5 on said test strips corresponding to said multiplicity of testing functionalities.

add
on

5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100